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ABSTRACT

A program for modifying classroom behavior of emotionally disturbed and other children (in grades 3 through 7) based on modeling is described, and specific behaviors and evaluation items for the program are provided along with their rationale. Research is reviewed in Part I and topics are covered, such as: the three effects of modeling (acquisition of a novel response, inhibition or activation of an already learned behavior, and stimulation of an observed behavior); four processes involved in observational learning (attentional, retention, motor reproduction, and incentive and motivational processes); the use of a token economy; and pre-entry skills necessary to participate in modeling behaviors (auditory acuity, visual acuity, and ability to decode English words into appropriate syntax and literal meaning). For each behavior specified in Part II, information is usually given on what the child is observing, the level of development involved in the activity, and examiner observations used to evaluate the behavior. (SB)

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OBSERVATIONAL LEARNING: A BEHAVIORAL APPROACH FOR USE IN THE CLASSROOM

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Part I

Review of pertinent reseacrh

Purpose of paper

Most educators and psychologists would agree that one of the fundamental modes of changing behavior involves modeling and observational learning. Research conducted within the framework of social-learning theory (Bandura, 1965a; Bandura and Walters, 1963) demonstrates that many learning phenomena resulting from direct experiences can occur on a vicarious basis through observation of other persons' behavior and its consequences for them. This is to say that much of what we learn has been learned through observing the environment and the persons operating within the specific environment. Emotional responses that are put forth by persons have been conditioned by those experiences of others undergoing pain and pleasure that have been witnessed.

It appears then from research that one's responses can be successfully modified through the observation of influential models. Modeling, therefore, appears to be an appropriate approach in modifying a youngster's behavior and in directing the youngster toward the internalization of the value of a specific behavior or set of behaviors that will bring about an optimal time for teacher-directed academic instruction.

There is much empirical evidence that points out that modeling has three clearly different effects that are brought about by three different sets of variables (Bandura, 1965a; Bandura and Walters, 1963):

1. As a result of modeling, a person can acquire a behavior that did not previously exist in his repertoire; this is called a novel response;

2. As a person observes the influential model, he may become more or less inhibited in performing a behavior or a set of behaviors that are presently in his repertoire but that he has, up until this point, been afraid to express; this effect of modeling can work in the opposite direction also: a person can become more inhibited in performing a behavior or a set of behaviors after observing the behavior pattern of an influential model;

3. The response facilitation effect occurs when the behavior of others serves as a stimulus for the observer to engage in the behavior; no new responses are actually acquired. An example of the response facilitation effect can be described in the set of behaviors that occurs when one youngster in a classroom asks to get a drink of water and another youngster also tends to ask to get a drink of water, having observed the behavior of the first youngster; no new responses on the part of the observer (the second youngster, in this case) are actually acquired.

The program that will follow is based on the assumption that observational learning can effect significant positive behavioral changes in a youngster. The program is designed to aid teachers in utilizing this powerful tool of instruction, namely: modeling. Most educators would agree that optimal learning

takes place when the youngster involved is committed to the instructional objectives that the teacher has designed for him. Every youngster who works toward those instructional objectives does so because he thinks that there is some reward that is forthcoming as a function of the behaviors he performs. Many youngsters that are in elementary school have already internalized the value of working toward those instructional objectives that are put forth by the teachers. These are youngsters that are perhaps more self-regulating and self-motivated. Other youngsters work toward the instructional objectives because they seek the approval of peers, parents, teacher. On the other hand, there are youngsters who are not working toward the instructional objectives because they have not found that such behaviors are rewarding to them.

The program to be described developed as an outgrowth of a token economy where children were reinforced for their positive behavior by earning tokens which they could cash in for rewards of their own choosing. The following program delineates the behaviors a youngster must perform in order to decide to perform the behaviors that will assure the earning of a token. To decide to earn the token incorporates the decision to perform the behavior that will earn the token. This behavior is a necessary pre-entry skill that a youngster must achieve in order to begin the process of the internalization of the value of working toward the instructional objectives that have been specified by the classroom teacher.

There are four processes involved in observational learning that

will be addressed in this program.

The attentional processes are influential in determining which modeling stimuli will be attended to and which will not be attended to. Models who are most influential will receive more attention. What makes a good model is based upon the stimulus of the model as well as the perception of the observer viewing the model (that perception is based on the observer's previous experience).

Retention processes involve the ability of the youngster to store in his memory the behavior of the model and at a later appropriate point to retrieve the behavior for appropriate use. Two operations are involved here: rehearsal behavior (the observer practices the model's behavior) and symbolic coding operation (observer organizes and classifies elements of the model's behavior into constructs that are easily stored). The first operation provides the opportunity for the second operation to occur, although the second operation can occur independently: the rehearsal behavior provides the observer with additional time to code the model's behavior.

Motor reproduction processes involves the capability of the youngster to reproduce the motor chains he has observed the model performing.

Incentive and motivational processes involve the use of positive incentives to translate observational learning into action. The incentive that will be used in the program is the token which can be translated into rewards of the youngster's choosing. In 1965 ( ), Bandura conducted a study which focused on matching behaviors. After a positive incentive was given to the youngsters,

they demonstrated that observational learning had indeed taken place. Prior to that occurrence, when no incentive was given, to the youngsters to perform what they had observed, a significantly smaller number of appropriate responses occurred. This study forther points out that positive incentives result in significantly greater performances of what was observed and learned.

The question still remains: how does the child arrive at the point where he says, "I want to behave the same way so I too can earn a token?" The purpose of this paper is to cite the behaviors and evaluation items that are necessary for a child to model another child who is earning a token for stating that he wants to begin working on the contract that the teacher has constructed for him. When one cites all the behaviors that are necessary to model the above behavior, one must consider not only affective behaviors but the overlap that exists between cognitive and affective domains. In the behavior schedule that follows, the child is called upon to perform behaviors in both domains in order to model the first youngster's behavior.

The program is designed for intermediate youngsters (grades 3 through 7). Although the program brings about significant behavioral changes when applied to youngsters who are experiencing emotional difficulties, it has also been very successful when applied in regular classes in a suburban school system. The optimal number of participants in the special class for emotionally handicapped is ten persons, including one teacher, one paraprofessional, and eight youngsters. In a regular classroom setting, the program has been suc-

cessfully applied with as many as fifteen persons including one teacher and fourteen youngsters. The program has developed around a behavior modification concept reinforcing positive behaviors. Essential to the program is an introductory discussion circle that occurs as the first activity in the classroom. Generally, the youngsters and the teacher and teacher aide, if one is present, place their chairs in the formation of a circle. In the circle, the teacher greets the children, discusses any items of information that she feels are important and asks the children if there are any items of information that they would like to discuss with the class. After approximately fifteen to twenty minutes of discussion, the teacher no longer encourages discussion and responds to questions in very short sentences. The children become restless and generally ask what they should do now. The teacher's response is: "we can remain in the circle until someone wants to begin his work for the day. If someone would like to earn a token, he can say that he wants to begin work and I will give him a token for doing so." The extension of this positive incentive encourages the youngsters to make the appropriate statements. The behaviors that follow deal with the experience of the youngster who is about to model his classmate's behavior in making the statement that he also would like to earn a token and begin work. The focus of this paper is the description of the behaviors that are necessary for a youngster to model the other youngster's behavior. The situation that permits the modeling experience is a child viewing an influential model who has been rewarded with a token for making

a statement that he wants to begin working.

The pre-entry skills that are necessary to participate in the behaviors that follow include:

auditory acuity: the child can hear what is spoken in the room;

visual acuity: the child can see what is occurring in the room;

ability to decode English words into appropriate syntax and literal meaning: the child can understand English at a level appropriate to an eight year old child.

The behaviors that are identified will take the reader through the varied and multiple processes that are involved in modeling a set of behaviors. Robert Gagne's analysis of the eight levels of instruction and learning form the framework for the behaviors to be identified. The behaviors will be specified one by one, identifying the observations the child is making, as well as his discrimination, attachment of meaning, categorizations, development of hierarchial constructs of motor and verbal chains in both the affective and cognitive domains and the matching and re-matching operations that occur extensively before modeling will in fact take place. Although these operations will take place on paper as discrete occurrences, they in fact happen rather simultaneously as the child is observing the event. For the sake of clarification of the behaviors that are involved in the notation of the overall modeling behavior, it becomes necessary to separate them in the way that has been described above. Once the child has successfully completed the taxonomy of modeling behaviors that

follows, he is then ready to enter Krathwohl's organization of affective behaviors at the 1.0 level (willingness to receive stimuli). Movement in Krathwohl's organization will bring the youngster closer to the internalization of the ultimate worth of the modeling behaviors for reasons of intrinsic value measured against the youngster's value system. The behaviors to be described intend to bring the child to the point where he can operate effectively at 1.0 level of Krathwohl's taxonomy of affective behaviors.

Part II

Identification of specific behaviors and evaluation items

Rationale

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child observes the environment.	At this point the child is observing the motor chains that are apparent in the group. He is observing the facial expressions and the motor chains that are connected to the facial expressions. He has not reached the discrimination level yet. He is merely taking in what he has seen; he has not begun to process it yet.	Examiner observes child and rates him according to the following behavior: a. eye contact b. facial expression c. span of attention d. body movement (toward, away, remain constant) e. vocal expression f. direction of attention g. motor expression	Evaluation is qualitatively based and will incorporate the examiner's observation of exactly what the child is doing. Optimal performance here will be expressed as follows: a. Eye contact has been achieved by child with the environment, the happy child, the unaffected child, the unhappy child, happy adult, unaffected adult, the adult who is saying "You've earned a token," and with the other persons as listed in behavior column. b. Facial expression changed in accordance with the child's observation of the persons and behaviors listed in Behavior column; the child is rated as to the congruence of his facial expression and the expression of the person and behavior he is observing. A complete match is not generally expected here because it is quite possible that a youngster could be observing and not facially express that observation. This index of performance is offered as a means of achieving more information but its accomplishment alone does not sufficiently or necessarily indicate that the youngster is indeed performing the behaviors as listed in the opposite behavior column. No one evaluation item in this category is intended to indicate successful completion of the behaviors but the emphasis is that an accurate pic-
Child observes a child who is happy.			
Child observes a child who is unhappy.			
Child observes a child who is unaffected.			
Child observes an adult(s) in the group is (are) happy.			
Child observes an adult(s) in the group is (are) unhappy.			
Child observes an adult(s) in the group is (are) unaffected.			
Child observes that an adult in the group has said to another child, "You have earned a token for your behavior."			
Child observes that another adult in the group has said, "Yes, you have earned a token."			
Child observes that another adult has said nothing to the other child.			
Child observes some other children in the group who are affected by the first child's behavior.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child observes some of the children in the group who are happy.			ture of the youngster's performance can be gotten when examining all the evaluative items in concert.
Child observes some of the children in the group who are unhappy.			c. Span of attention is evaluative in the sense that the child has his attention focused on the event of the reward being given to the other youngster. The attention must be directed at the particular time of the event but not necessarily immediately preceding or following the event in order to achieve a high performance rating here.
Child observes some of the children in the group who are unaffected by the first child's behavior.			d. Body movement is noted by the examiner in terms of those specific movements that adds to the child's positively active participation in observing the event, those specific movements that detract from the child's positively active participation, and those specific body movement that neither add nor detract from the child's participation in the event.
Child observes the interaction between the child who is being rewarded and the adult who is doing the rewarding.			e. Vocal expression is examined in terms of the content and manner of expression: "Jimmy looks happy;" "Sal looks sad."
Child observes the interaction between the other adult who is not rewarding and the child being rewarded.			f. Direction of attention is noted by examiner. Child should be focused on the event and not on other extraneous events occurring in the room at the same time.
Child observes the following interactions: - The happy child interacting with the happy child. - The happy child interacting with the unhappy child - The happy child interacting with the unaffected child. - The happy child interacting with the happy adult. - The happy child interacting with the unhappy adult. - The happy child interacting with the unaffected adult. - The unhappy child interacting with the happy child.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
- The unhappy child interacting with the unhappy child. - The unhappy child interacting with the unaffected child. - The unhappy child interacting with the happy adult. - The unhappy child interacting with the unhappy adult. - The unhappy child interacting with the unaffected adult. - The unaffected child interacting with the happy child. - The unaffected child interacting with the unhappy child. - The unaffected child interacting with the unaffected child. - The unaffected child interacting with the happy adult. - The unaffected child interacting with the unhappy adult. - The unaffected child interacting with the unaffected adult. - The happy adult interacting with the happy child. - The happy adult interacting with the unhappy child. - The happy adult interacting with the unaffected child. - The unhappy adult interacting with the happy child. - The unhappy adult interacting with the unhappy child. - The unhappy adult interacting with the unaffected child. - The unaffected adult interacting with the happy child.			g. Motor expression is noted. If child moves himself closer to the event, and is performing as indicated above, the examiner can be reasonably assured that the child is observing the event.

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
- The unaffected adult interacting with the unhappy child			
- The unaffected adult interacting with the unaffected child.			
- The happy adult interacting with the happy adult.			
- The happy adult interacting with the unhappy adult.			
- The happy adult interacting with the unaffected adult.			
- The unhappy adult interacting with the happy adult.			
- The unhappy adult interacting with the unhappy adult.			
- The unhappy adult interacting with the unaffected adult.			
- The unaffected adult interacting with the happy adult.			
- The unaffected adult interacting with the unhappy adult.			
- The unaffected adult interacting with the unaffected adult.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
The child observes the sum total of the interactions of persons.			
The child observes the sum total of the interactions of persons within the sum total of the environment.			
Child recalls previous motor chains that he has experienced that are similar to the motor chains of the happy child.	Before he can attach meaning to these motor chains that he has just observed, child recalls this type of motor chain in his previous experience and recalls the meaning of these past motor chains, then he associates the present motor chains with the meaning of past motor chains and begins to use this association to attach meaning to the present motor chain.	Examiner asks the youngster, "Does what you are seeing now remind you of anything you have seen before?" If this does not produce any response from the child, examiner then asks, "Do you remember when another child received a token?" "Do you remember how all of us behaved when the child received the token?" (If youngster is unable to recall specific motor chains of events that he has observed, examiner offers the observation of past motor chains that are in the youngster's repertoire. This is offered as an instructional technique). Examiner records youngster's responses and rates them in terms of appropriateness of match of motor chains of the happy child, unhappy child, unaffected child, happy adult, unhappy adult, unaffected adult.	Examiner must ask the child to recall previous motor chains if the youngster does not voluntarily offer them.
Child recalls previous motor chains that he has experienced that are similar to the motor chains of the unhappy child.			
Child recalls previous motor chains that he has experienced that are similar to the motor chains of the unaffected child.			
Child recalls previous motor chains that he has experienced that are similar to the motor chains of the happy adult.			
Child recalls previous motor chains that he has experienced that are similar to the motor chains of the unhappy adult.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child recalls previous motor chains that he has experienced that are similar to the motor chains of the unaffected adult.			
Child recalls the meaning of these similar past motor chains.		Evaluator asks the child, "What meaning does that smile (frown, no look at all) have to you?"	The question may or may not be necessary depending on the voluntary responses of the child. The examiner records the child's response and the appropriateness of the match between the response of the youngster and the meaning of the similar past motor chains.
Child associates the present motor chains that he is experiencing with the meaning of the past motor chains.		Evaluator states to child, "Sam, you have told me what you remembered about what smiles (frown, no look at all) mean. How is what you are now seeing the same or different? Is what you are now seeing, the same as the smiles (frown, lack of expression) you remembered?"	
Child attaches meaning to the smiling gestures of the happy adult he has observed.	Now the child begins to attach meaning to these motor chains. Then the child makes discriminations to differentiate the levels of happiness, etc. that he has witnessed as a result of the motor chains of those that he has observed.		
Child attaches meaning to the frowning gestures of the unhappy adult he has observed.			
Child attaches meaning to the unaffected adult he has observed.			
Child attaches meaning to the smiling gestures of the happy child he has observed.		Examiner records the youngster's response and rates it according to the number of appropriate associations that the youngster is able to construct.	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
		Examiner asks youngster, "What does the smile (frown, or no look at all) you are seeing mean to you now?" Examiner rates the youngster according to the appropriateness of response.	
Child attaches meaning to the frowning gestures of the unhappy child he has observed.			
Child attaches meaning to the unaffected gestures of the unaffected child he has observed.			
Child makes differentiations in meaning of the motor chains of the happy adult who is smiling.		Examiner asks youngster, "How do the smile and actions of the happy (unhappy, adult (child) with no look at all) adult (children) differ from your past experiences with happy (unhappy, adult (child) with no look at all) adults (children)?" Examiner rates youngster according to the appropriateness of response.	
Child makes differentiations in meaning of the unhappy adult who is frowning.			
Child makes differentiations in meaning of the motor chains of the unaffected adult who appears unaffected.			
Child makes differentiations in meaning of the motor chains of the happy child who is smiling.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child makes differentiations in meaning of the motor chains of the unhappy child who is frowning.			
Child makes differentiations in meaning of the motor chains of the unaffected child who appears unaffected.			
Child re-matches his own previous experiences and his present observation, association, attachment of meaning and differentiation of the motor chain of the -- happy child -- unhappy child -- unaffected child -- happy adult -- unhappy adult -- unaffected adult -- happy child interacting with happy child -- happy child interacting with unhappy child -- happy child interacting with unaffected child. -- happy child interacting with happy adult -- happy child interacting with unhappy adult -- happy child interacting with unaffected adult.	After the child makes discriminations as to the levels of affectedness that he is experiencing, he rematches that experience with his previous experience involving similar situations, observations, and discriminations. He is going to use these items of association in order to operate in the next step, which will involve the categorization of the behaviors that he has witnessed. The rematching and reassociating reinforces and/or modifies the initial associations and attachment of meaning.	Examiner asks the youngster, "Do the actions and faces of people that you remember looked happy (unhappy, or had no look at all) remind you what you are seeing now in these persons' actions and faces? How is what you remember different from or the same as what you are seeing now?" Examiner rates the child's response according to the appropriateness of the child's performance of rematching his own previous experiences with his present observation, associations, attachment of meaning and differentiation of the motor chain of the happy child, (unhappy child, unaffected child, happy adult, unhappy adult, unaffected adult, and the interactions of these persons).	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
-- unhappy child interacting with happy child.			
-- unhappy child interacting with unhappy child.			
-- unhappy child interacting with unaffected child.			
-- unhappy child interacting with happy adult.			
-- unhappy child interacting with unhappy adult.			
-- unhappy child interacting with unaffected adult.			
-- unaffected child interacting with happy child.			
-- unaffected child interacting with unhappy child.			
-- unaffected child interacting with unaffected child.			
-- unaffected child interacting with happy adult.			
-- unaffected child interacting with unhappy adult.			
-- unaffected child interacting with unaffected adult.			
-- happy adult interacting with happy child.			
-- happy adult interacting with unhappy child.			
-- happy adult interacting with unaffected child.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
-- unhappy adult interacting with happy child. -- unhappy adult interacting with unhappy child. -- unhappy adult interacting with unaffected child.			
-- unaffected adult interacting with happy child. -- unaffected adult interacting with unhappy child. -- unaffected adult interacting with unaffected child.			
-- happy adult interacting with happy adult. -- happy adult interacting with unhappy adult. -- happy adult interacting with unaffected adult.			
-- unhappy adult interacting with happy adult. -- unhappy adult interacting with unhappy adult. -- unhappy adult interacting with unaffected adult.			
-- unaffected adult interacting with happy adult. -- unaffected adult interacting with unhappy adult. -- unaffected adult interacting with unaffected adult.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child recalls past categorizations of similar motor chains of the happy child.		Examiner states to the child, "You have told me some other times when someone's face looked happy (unhappy, no look at all). You have told me how these smiles (frowns, no looks at all) are the same and how they are different. Now can you tell me what are the actions that go along with a happy face (unhappy face, no look at all)? Can you tell me why you have put these actions and looks together?"	Examiner records and rates appropriateness of the performance in recall these categorizations. At times, it may be possible depending on the spontaneity of the youngster to obtain the above information without resorting to asking specific questions geared to retrieve the items and ascertain that the behaviors are indeed occurring. The child may, in his general discourse indicate to the examiner, that he has performed these behaviors.
Child recalls past categorizations of similar motor chains of the unhappy child.			
Child recalls past categorizations of similar motor chains of the unaffected child.			
Child recalls past categorizations of similar motor chains of the unhappy adult.	Having rematched and reinforced meaning of motor chains, child now recalls past categorizations of similar motor chain and then associates those categorizations with the present motor chaings to be categorized.		
Child recalls past categorizations of similar motor chains of the happy adult.			
Child recalls past categorizations of similar motor chains of the unaffected adult.			
Child associates those past categorizations with the present motor chains to be categorized.		Examiner states to child: You have just told about how you put faces and actions together into groups of what actions go with a happy face (unhappy face, no look at all). Does what you have told me help you to put what you are seeing now, the faces and actions, into faces and actions that go together and those that don't go together?"	Different ways of asking the same question are provided here as the youngster's answers may tend to be repetitive instead of expansive of information. This comment will generally apply when assessing higher cognitive operations.

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child uses the above associations in order to place the present motor chains into categories.		Examiner asks the child, "How do the faces and actions of the person you are seeing now go together? Can you put together for me those actions and faces that go together?"	
Child categorizes his perceived experience of each individual according to the intensity the happiness of the motor chain that he has observed.	At this point the child is able to categorize his perceived experience of individuals according to the intensity of happiness of the motor chain that he has observed. He will use this information in order to develop a hierarchy.	Examiner states to the child, "What faces and actions that go together tell you that there is more happiness (unhappiness, no feeling at all) than other faces and actions that go together?"	
Child categorizes his perceived experience of each individual according to the intensity of unhappiness of the motor chains that he has observed.			
Child categorizes his perceived experience of each individual according to the intensity of unaffectedness of the motor chain that he has observed.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child categorizes the sum total of the interactions of those who appear happy.			
Child categorizes the sum total of the interactions of those who appear unhappy.			
Child categorizes the sum total of the interactions of those who appear unaffected.			
Child categorizes the sum total of interactions of the group in terms of a level of affectedness of motor chain observation.			
Child recalls past hierarchies of motor chains that address themselves to levels of happiness.	Having made a categorization of these motor chains, the child recalls past hierarchies that address themselves to levels of happiness, unhappiness and unaffectedness. Child uses these recollections to associate to the motor chains under examination in order to set up a hierarchy.	Examiner states to the child: "You have told me about how the actions and faces you remembered went together. You have also told about which ones told you that there was much happiness (unhappiness, no feeling at all) in them. Now tell me which of those faces and actions told you that there was the most happiness (unhappiness, no feeling at all). Which actions and faces that went together told you that there was a little bit less happiness (unhappiness, no feeling at all) than the ones that were the most happy (un-	
Child recalls past hierarchies of motor chains that address themselves to levels of unhappiness.			
Child recalls past hierarchies of motor chains that address themselves to levels of unaffectedness.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
		happy, unfeeling). Tell me which actions and faces, while they still told you that they were happy (unhappy, unfeeling), showed the least happiness (unhappiness, no feeling at all) out of all the actions and faces that were happy (unhappy, had no feeling at all)."	
Child associates the recollections of past motor chain hierarchies of happiness with the categorizations of the present motor chains indicating happiness.		Examiner states to the child: "You have just talked about which faces and actions told you that there was the greatest happiness (unhappiness, no feeling at all) and those that told you there was less. Now tell me about how the actions and faces that you are now seeing are the same as the actions and faces that told you that there was the greatest amount of happiness (unhappiness, no feeling at all). Tell me about the actions and faces that are the same as the ones you remembered that were less happy (unhappy, unfeeling), and about the actions and faces that still told you that they were happy (unhappy, unfeeling) even though they contained the least amount of happiness (unhappiness, no feeling at all)."	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child sets up a hierarchy of adult motor chains that lead to expressions of happiness, using the associations above. Child sets up a hierarchy of adult motor chains that lead to expressions of unhappiness, using the association above. Child sets up a hierarchy of adult motor chains that lead to expressions of unaffected, using the associations above. Child sets up a hierarchy of child motor chains that lead to expressions of happiness, using the associations above. Child sets up a hierarchy of child motor chains that lead to expressions of unhappiness, using the associations above. Child sets up a hierarchy of child motor chains that lead to expressions of unaffectedness, using the associations above.	At this point the child is setting up a hierarchy of the levels of affectedness that he has observed based on observable motor chain experiences	Examiner states to child: "Tell me which of the actions and faces that you have put together that tell you that a person is happy (unhappy, or has no feeling at all), tell you that he is the most happy (unhappy, has no feeling at all). Which actions and faces show you that there is a little bit less happiness (unhappiness, no feeling at all)? Which actions and faces that still tell you that there is happiness (unhappiness, no feeling at all) tell you that there is the least amount of happiness (unhappiness, no feeling at all)?"	
Child decodes the words that he hears spoken by the happy adult into appropriate syntax. (see pre-entry skills)	As the child is completing the steps that are involved in analyzing the motor chains that he has observed, he also is moving into the area of verbal chains and verbal associations that Gagne speaks of, and the analysis thereof.	Examiner asks the child, "What did that person say? (identifying the happy adult, unhappy adult, unaffected adult, happy child, unhappy child, unaffected child)."	In order to ascertain the child's performance in understanding the liberal message of the particular person's verbal chain, the child must be able to re-state what was said, or state the most important parts of what was said.

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child decodes the words that he hears spoken by the unaffected adult into appropriate syntax.			
Child decodes into syntax the words that he hears spoken by the child being rewarded.			
Child decodes into appropriate syntax the words that he hears spoken by the happy child.			
Child decodes the words that he hears spoken by the unhappy child into appropriate syntax.	The child now is decoding the verbal chains into literal "meaning" (a lower level of meaning).		
Child decodes the words that he hears spoken by the unaffected child into appropriate syntax.			
Child recalls past verbal chains of other happy adult, as well as their associations, categorizations and hierarchies.	The words that the child now hears triggers the youngster to recall other verbal chains spoken by other persons that, when decoded, produce a similar literal meaning.	Examiner states to the child: "Can you remember what another person said when they were happy (unhappy, had no feeling at all) to let you know that they were happy (unhappy, had no feeling)? Which words told you that they were a little bit less happy (unhappy, no feeling at all). Which words told you that they were still happy (unhappy, had no feeling at all) but that the words contained the least amount of happiness (unhappiness, no feeling at all) in them?"	
Child recalls past verbal chains of other unhappy adults, as well as their associations, categorizations and hierarchies			
Child recalls past verbal chains of other unaffected adults, as well as their associations, categorizations, and hierarchies.			
Child recalls past verbal chains of other unaffected children, as well as their associations, cate-			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
gorizations and hierarchies.			
Child recalls past verbal chains of other happy children, as well as their associations, categorizations and hierarchies.			
Child associates meaning of the verbal chains of the happy adult with the meaning of the past verbal chains that were uttered by other happy adults in the child's experience and were categorized by the child according to intensity of happiness expressed.		Examiner asks the child: "How are the words you remembered that told you that there was happiness (unhappiness, no feeling at all) the same as the words you are hearing now that tell you there is happiness (unhappiness, no feeling at all)?"	
Child associates meaning of the verbal chains of the unhappy adult with the meaning of past verbal chains that were uttered by other unhappy adults in the child's experience and were categorized by the child according to intensity of unhappiness expressed.	The child associates the meaning of these present verbal chains with the meaning of past verbal chains.		
Child associates meaning of the verbal chains of the unaffected adult with the meaning of past verbal chains that were uttered by other unaffected adults in the child's experience and were categorized by the child according to intensity of happiness expressed.			
Child associates meaning of the verbal chains of the unhappy children with the meaning of past			

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BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
verbal chains that were uttered by other unhappy children in the child's experience and were categorized by the child according to intensity of happiness expressed.			
Child associates meaning of the verbal chains of the unhappy children with the meaning of past verbal chains that were uttered by other unhappy children in the child's experience and were categorized by the child according to intensity of happiness expressed.			
Child associates meaning of the verbal chains of the happy children with the meaning of past verbal chains that were uttered by other happy children in the child's experience and were categorized by the child according to intensity of happiness expressed.			
Child associates meaning of the verbal chains of the unaffected children with the meaning of past verbal chains that were uttered by other unaffected children in the child's experience and were categorized by the child according to intensity of happiness expressed.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child discriminates among the verbal chains of the happy adult as to the level (intensity) of happiness, matching them against his past associations and categorizations as above.	He begins to discriminate among the verbal chains, noting the level of affectedness that each verbal chain contains having matched them against his past associations and categorizations as above.	Examiner asks the child: "Tell me which words that you are hearing now tell you that the person is the most happy, (unhappy, no feeling at all)? Which words tell you that there is a little bit less happiness (unhappiness, no feeling at all). Which words tell you that there is the least amount of happiness (unhappiness, no feeling at all) although there is still some happiness (unhappiness, no feeling at all).	
Child discriminates among the verbal chains of the unhappy adult as to the level (intensity) of unhappiness, matching them against his past associations and categorizations as above.			
Child discriminates among the verbal chains of the unaffected adult as to the level (intensity) of unaffectedness, matching them against his past associations and categorizations as above.			
Child discriminates among the verbal chains of the unhappy child as to the level (intensity) of unaffectedness, matching them against his past associations and categorizations as above.			
Child discriminates among the verbal chains of the unaffected child as to the level (intensity) of unaffectedness, matching them against his past associations and categorizations as above.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child discriminates among the verbal chains of the happy child as to the level (intensity) of unaffectedness, matching them against his past associations and categorizations as above.			
Child categorizes the decoded words into levels of happiness, matching them against his past categorizations.	At this point, the child categorizes the decoded words into levels of happiness that the decoded words suggest matching them against the recalled previous categorizations. This behavior enables him to then set up a cognitive hierarchy of the levels of happiness that are expressed in the verbal chains.	Examiner asks child: "You have just told me how some of the words that you are hearing now tell you that there is the greatest amount of happiness (unhappiness, no feeling at all) and how other words tell you that there is a little bit less happiness (unhappiness, no feeling at all) and how some words tell you that there is the least amount of happiness (unhappiness, no feeling at all). Now tell me how these words that you have just heard are the same as the words you remembered as having the greatest amount of happiness (unhappiness, no feeling at all), a little bit less happiness (unhappiness, no feeling at all) and the least amount of happiness (unhappiness, no feeling at all).	
Child categorizes the decoded words into levels of unhappiness, matching them against his past categorizations.			
Child categorizes the decoded words into levels of unaffectedness, matching them against his past categorizations.			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child categorizes the sum total of the interaction of the decoded words into a sum total level of affectedness, matching them against his past categorizations.		Examiner states to the child: "As you are hearing the words that are being said, I want you to think of them all together. Now tell me if you would say whether you think that the words you are hearing tell you that there is more happiness than unhappiness or no feeling at all in the room; whether all the words tell you that there is more unhappiness than happiness or no feeling at all in the room, or whether what you hear means that there is no feeling at all, rather than happiness or unhappiness in the room."	
Child sets up a cognitive hierarchy of adult verbal chains that lead to expressions of happiness, matching constantly with previous similar hierarchies that have been recalled. Child sets up a cognitive hierarchy of adult verbal chains that lead to expressions of unhappiness, matching constantly with previous similar hierarchies that have been recalled. Child sets up a hierarchy of adult verbal chains that lead to expressions of unaffectedness, matching constantly with previous similar hierarchies that have been recalled.	At this point, the child is setting up a cognitive hierarchy of the levels of affectedness that the verbal chains indicate, always matching his constructions with previous similar hierarchies in his repertoire.	Examiner asks the child: "Tell me which statement made by one person told you that he is the happiest (unhappiest, had absolutely no feeling at all) out of all the persons in the room. Which statement made by one person tells you that he was just a tiny bit less happy (unhappy, unfeeling)? Which statement showed a little bit less happiness (unhappiness, feeling) than the last one? Which statement showed even less happiness (unhappiness, feeling) than the last one? Which one showed the least amount of happiness (unhappiness, no feeling at all) yet still was happy (unhappy, unfeeling)?"	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child sets up a cognitive hierarchy of child verbal chains that lead to expressions of happiness, matching constantly with previous similar hierarchies that have been recalled.			
Child sets up a cognitive hierarchy of child verbal chains that lead to expressions of unhappiness, matching constantly with previous similar hierarchies that have been recalled.			
Child sets up a cognitive hierarchy of child verbal chains that lead to expressions of unaffectedness, matching constantly with previous similar hierarchies that have been recalled.			
Child sorts out how his observations of the behaviors and interactions match the motor and verbal hierarchies he has set up and his previous experience.	Having set up a hierarchy of motor chains and verbal chains that denote the levels of affectedness that he has experienced, the child must now sort out how the interactions of the motor and verbal chains add to or take away from the belief that he can place in the hierarchies that he has set up.	Examiner asks the child: "You have told me about how you are now thinking of the actions, faces and words that you are seeing. How are they the same as what you thought about actions, faces and words that told you some one was happy (unhappy, had no feeling at all) in the past?"	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child recalls the cognitive values that he had previously assigned to similar previous experience.	In order to assign a cognitive value to a new experience, the child recalls what cognitive value has been assigned in the past for a similar item.	Examiner asks child: "Have you liked to see smiles (frowns, looks of no feeling) and hear happy (unhappy, words without feeling) words many times during the day? How much has it mattered to you to see smiles (frowns, looks with no feeling) and to hear happy (unhappy, words with no feeling) words? How important have you thought this is?"	
Child associates these previous cognitive values with the items that are to be assigned a cognitive value now.	The child, having recalled previous cognitive values, "now associates those cognitive values with the items to be assigned a cognitive value.	Examiner asks child, "How are the words, faces and actions, the ones in your past that you have spoken about and the present words, faces, actions, the same (different)?"	
Child assigns cognitive values according to a continuum of negative to positive in regard to all the behaviors, in isolation and in context, he has observed, using previous S-R chains and his established hierarchies, as well as the recall and association of previous cognitive values.		Examiner asks the child: "Do you like to see these smiles (frowns, looks of no feeling) and hear these happy (unhappy, words without feeling) words many times during the class? How much does it matter to you to see these smiles (frowns, looks with no feeling) and to hear these happy (unhappy, words with no feeling) words? How important do you think all of this is?"	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
The child assigns a value to the experience of observing, including the associations, the discriminations, the categorizations, and hierarchies. -- the happy child -- the unhappy child -- the unaffected child -- the happy adult -- the unhappy adult -- the unaffected adult -- happy child interacting with happy child -- happy child interacting with unhappy child -- happy child interacting with unaffected child. -- happy child interacting with happy adult -- happy child interacting with unhappy adult -- happy child interacting with unaffected adult -- unhappy child interacting with happy child -- unhappy child interacting with unhappy child -- unhappy child interacting with unaffected child	Using matching, the child assigns a cognitive value to these new experiences, taking into account previous cognitive values that were attached to similar experiences.	Examiner states to the child: "You are seeing many different persons acting in many different ways. When you see the happy child (substitute <u>all</u> of the persons in the Behavior Column) do you have a good thought or a bad thought?"	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
-- unhappy child interacting with happy adult -- unhappy child interacting with unhappy adult -- unhappy child interacting with unaffected adult			
-- unaffected child interacting with happy child -- unaffected child interacting with unhappy child -- unaffected child interacting with unaffected child			
-- unaffected child interacting with happy adult -- unaffected child interacting with unhappy adult -- unaffected child interacting with unaffected adult			
-- happy adult interacting with happy child -- happy adult interacting with unhappy child -- happy adult interacting with unaffected child			
-- unhappy adult interacting with happy child -- unhappy adult interacting with unhappy child -- unhappy adult interacting with unaffected child			

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
-- unaffected adult interacting with happy child -- unaffected adult interacting with unhappy child -- unaffected adult interacting with unaffected child -- happy adult interacting with happy adult -- happy adult interacting with unhappy adult -- happy adult interacting with unaffected adult -- unhappy adult interacting with happy adult -- unhappy adult interacting with unhappy adult -- unhappy adult interacting with unaffected adult -- unaffected adult interacting with happy adult -- unaffected adult interacting with unhappy adult -- unaffected adult interacting with unaffected adult.			
Child recalls the positive reinforcement of similar behaviors that he has experienced in the past.	Child now is recalling the positive reinforcement he has observed and/or experienced in the past.	Examiner asks the child, "Can you remember anyone who rewarded you for doing the same kind of action?"	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child recalls the positive reinforcement of similar behaviors that he has observed that others have experienced in the past.		Examiner asks the child, "Can you remember watching someone else being rewarded for doing the same kind of action?"	
Child recalls the intensity of effort that was required and the intensity of reward that followed the extension of effort in his past.	In order to make a decision as to whether a behavior is worth the effort that he must expend, the child recalls his past and other persons' past experiences that relate to the above.	Examiner asks the child, "Can you remember how hard you tried so that you could get a reward? Can you remember how good you thought the reward was?"	
Child recalls the intensity of effort that was required and the intensity of reward that followed the extension of effort in regard to his observation of other persons' past experiences.		Examiner asks child, "Can you remember how hard you thought another person tried so that he could get a reward? Can you remember how good you thought the reward was?"	
Child recalls his observation of others' affective reactions undergoing similar experiences.		Examiner asks the child, "Can you remember how these persons looked and what they said when they got a reward? How did what they did show you how they felt? What did they say, what did they do?"	
Child recalls his observation of his own affective reactions when he was undergoing similar experiences.		Examiner asks the child, "Can you remember how you acted what you said, what you did when you were rewarded for the same thing? How did what you said and did show other people how you felt about getting the reward?	

BEHAVIOR	RATIONALE	EVALUATION ITEM	RATIONALE
Child associated his previous affective experiences with the present experience.		Examiner asks the child: "You have just told me how getting a reward made you feel and what you thought about it. What is the same about what you are seeing now? Does the fact that you have earned a reward help you to understand what is taking place here?"	
Child evaluates the present situation in terms of expected effort that is required and the expected intensity of the reward.		Examiner asks the child, "How hard do you think it was for this child to get the reward right now? How good do you think the reward is?"	
Child assigns a cognitive value to the pursuit of a similar reward and the antecedent behavior required for the reward.		Examiner asks the child: "Do you think that doing something and being rewarded for it means something to you? Can you tell me what you think it means to you?"	
Child assigns an affective value to the pursuit of a similar reward and the antecedent behavior required for the reward.		Examiner asks the child, "Do you feel that doing something and being rewarded for it means something to you in this classroom? How much does it mean to you?"	
Child decides to seek a similar reward for a similar behavior.		Examiner asks the child, "Have you decided to act the same way to get a reward like this?"	

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